

DROSOPHILA NEOIMMIGRANS, A NEW SPECIES FROM SOUTH KANARA, INDIA (DIPTERA : DROSOPHILIDAE)

P. G. GAI & N. B. KRISHNAMURTHY

Department of Post - Graduate Studies and Research in Zoology,
University of Mysore, Manasa Gangotri, Mysore India 570 006

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Drosophila neoimmigrans, sp. nov., a member of the "typical" *immigrans* subgroup of the *immigrans* species group collected from South Kanara District is described. The systematic position and relationships are discussed.

(Key words: *Drosophila neoimmigrans*, new species, *immigrans* subgroup)

The Western ghats is known to harbour a number of *Drosophila* species because of its excellent ecogeographic conditions. The collection reports of Prakash and Reddy (1977, 1978, 1979 and 1980), Muniyappa and Reddy (1980) have revealed some new species. In view of the rich abode offered by the Western ghats for a variety of rich insect fauna, it is possible that several *Drosophila* species, which are unknown to science may also be available in these localities. Hence a collection trip was undertaken to investigate the *Drosophila* fauna of the Western ghats. A new species was collected at Puttur and surrounding areas (12° 21' N and 13° 58' N latitude and 74° 35' and 74° 40' E longitude) which is herein reported.

***Drosophila neoimmigrans*, sp. nov.** (Figs. 1-7)

Male and female: Large dark brown flies, pigmentation in males darkens with age.

Body length: Male 3.06 mm, Female 3.18 mm.

Head, ♂ and ♀: Arista with 10 branches (6-4) including terminal fork. Front dark brown. Antenna brownish black.

Cheek with 2 vibrissae, both of which are curved. Palpi light brown with 3 large straight bristles and few smaller ones. Carina broad with a few small bristles. Orbital bristles in the ratio of 2:1:2. Eyes deep red. Inner and outer verticals of same size and reclinate. Postverticals crossed and convergent. Ocellar triangle broad with 2 long bristles.

Thorax, ♂ and ♀: Dark brown. Acrostichal hairs in 8 rows, regularly placed. Anterior dorsocentrals reclinate. Ratio; anterior: posterior dorsocentrals 0.5. Scutellum dark brown. Anterior scutellars convergent, posterior scutellars convergent and crossed. Anterior and posterior sternopleurals of equal size. Middle sternopleural shorter than anterior and posterior. Prescutellars absent.

Wings, ♂ and ♀: Smoky. Wing length 2.67 mm (male). 2.81 mm (female).

	C-in-dex	4V-in-dex	4C-in-dex	5X-in-dex	M-in-dex
♂	3.95	1.22	0.47	0.81	0.29
♀	3.86	1.29	0.44	0.85	0.30

Third costal section with heavy setation on basal ♂ and ♀ 0.6. (Wing indices

24865
25661



Figs. 1-47. *Drosophila neoimmigrans* sp.:
1. Fore leg of male.

calculated after Okada, 1956 and Bock, 1976). Halteres small, brownish.

Legs: Pre-apicals on all tibiae, apicals only on first tibia. A row of 7 to 9 short thick peg like bristles (cuneiform) on the inner side of first femur. Sex comb absent (Fig. 1).

Abdomen, ♂ and ♀: The tergites of males and females are dark brown. Abdominal tergites and sternites of males darken with age.

Periphallalic organs (Fig. 2): Epandrium (Genital arch) narrow, with broad anterior end. Toe with 2-3 long bristles. Heel narrow with 3-4 bristles. Primary surstylus (primary clasper) present with 7-9 stout blunt teeth arranged in a con-

cave row and with 2-3 stout short inwardly curved bristles. Secondary surstylus (secondary clasper) absent. Cerci (anal plate) more or less kidney shaped bearing 20-25 long bristles uniformly distributed except at posterior end which carries 2 short bristles. Cerci independent of epandrium.

Phallic organs (Fig. 3): Aedeagus yellow, cylindrical, small apically pointed with petal like arrangement. Anterior gonapophyses (anterior parameres) club shaped articulating with aedeagus and without hairs. Posterior gonapophyses (posterior parameres) long, reaching tip of aedeagus. Caudal margin of novasternum truncate, bearing 4 spines. Basal apodeme projecting beyond ventral fragma.

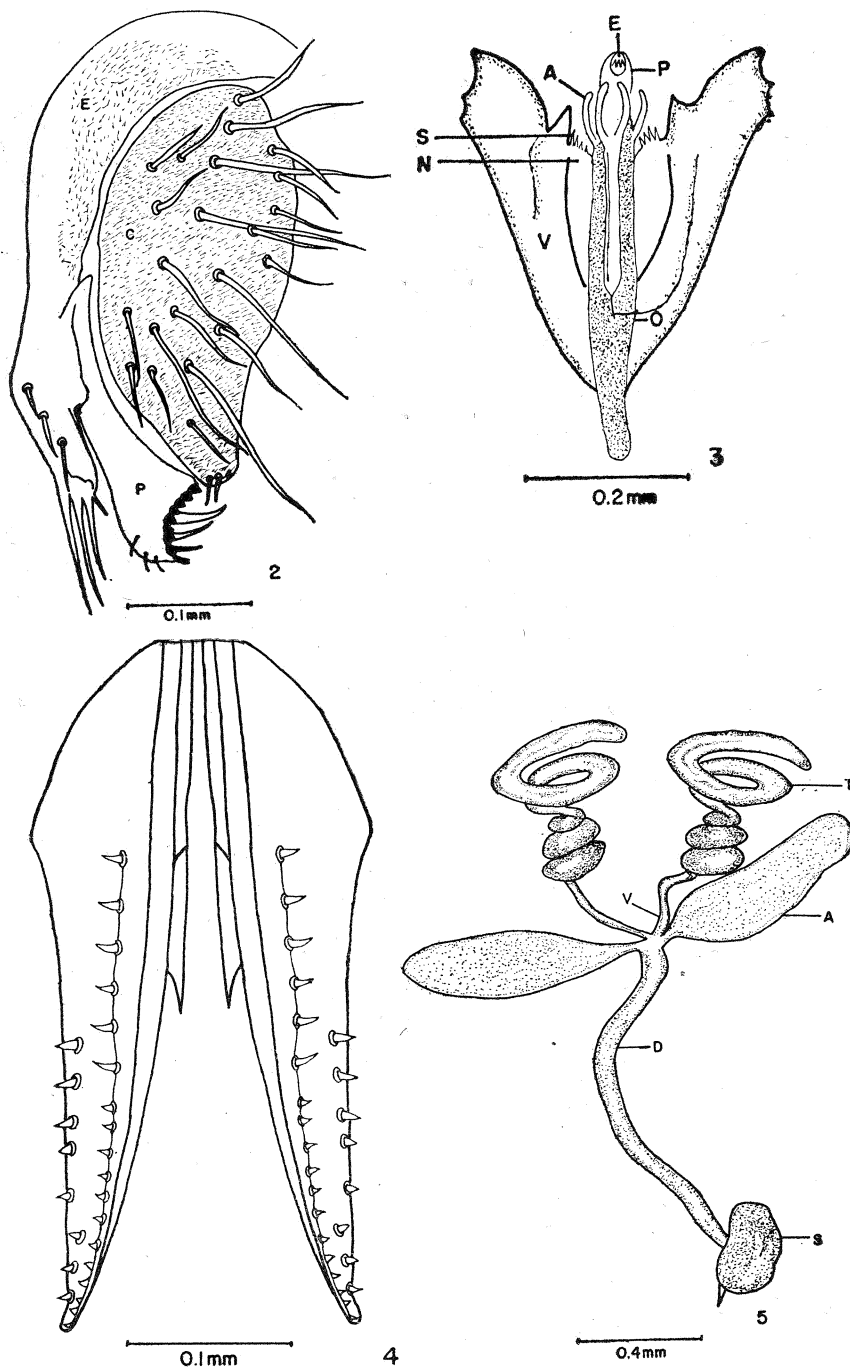


Fig. 2. Periphallallic organs, C—Cerci, E—Epandrium, P—primary Surstylus, 3. Phallic organs, A—Anterior gonopophyses, E—Aedeagus, O—Ejaculatory Apodeme, P—Posterior gonopophyses, S—Spine of Novasternum. 4. Egg guide. 5. Male reproductive organs, T—Testes, V—Vas deferens, A—Accessory gland, D—Anterior ejaculatory duct, S—Ejaculatory bulb.

of chitinized teeth on primary surstylus and absence of secondary surstylus warrants the inclusion of this species in the *immigrans* species group (Hsu, 1949; Okada, 1956 and Wilson *et al.*, 1969).

Okada (personal communication, October, 1981) has pointed out that the new species belongs to the *immigrans* group. On comparison with the other members of the *immigrans* group, the species under study shows close resemblance to that of *D. immigrans*, Sturtevant, 1981, in having a narrow epandrium; nonprominent heel; protruding primary surstylus (Hsu, 1949) similar spermathecae, ventral receptacle and paragonia (Throckmorton, 1962). But it distinctly differs from *D. immigrans* in the presence of 8 chitinized teeth of uniform size on the primary surstylus; blunt toe and also in regard to pigmentation in male which darkens with age. It is interesting to note that the testes in the present species is made up of 5 coils, which is a unique feature. This and other characters such as presence of 8 chitinized teeth of uniform size on the primary surstylus, blunt toe, pigmentation in males which darkness intensely with age demand an independent status for this new species. The new species is named *Drosophila neoimmigrans*, as it closely resembles *D. immigrans*.

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